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ABSTRACT

Eighty-six North Georgia College students in four graduate sections of educational research taught by the same instructor were administered the Attitudes toward Educational Research Scale at the beginning and the end of the quarter. Attitude posttest scores were significantly higher than pretest scores. Undergraduate grade point averages (GPAs), entering graduate GPAs, and weighted common National Teacher Examination (NTE) scores were also obtained for the students. NTE scores were the single best predictor of achievement in the course, and both undergraduate and graduate GPAs were also significant predictors of achievement. Educational research attitude scores were not significantly related to scores on the achievement tests. (Author/PN)

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Predicting Success in an Educational Research Course

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Abstract

Eighty-six students in four graduate sections of educational research taught by the same instructor were administered the Attitudes Toward Educational Research Scale at the beginning and the end of the quarter. Attitude posttest scores were significantly higher than pretest scores. Undergraduate GPAs, entering graduate GPAs, and weighted common National Teacher Examination (NTE) scores were also obtained for the students. NTE scores were the single best predictor of achievement in the course, and both undergraduate and graduate GPAs were also significant predictors of achievement. Educational research attitude scores were not significantly related to scores on the achievement tests.

Predicting Success in an Educational Research Course

Professors of educational research need to continually examine factors that relate to students' success in educational research. One aspect that has probably been neglected by many professors is the improvement of attitudes. Whether or not the attitudes relate to achievement in the course should give guidelines to instructors in their teaching. Also since educational research is a course often dreaded by many students, it would be helpful to look at other variables - grade point averages (GPAs) and test scores - that might predict achievement. The primary objectives of the present study were to:

1) Determine if students' attitudes toward educational research improve as a result of having taken an educational research course.
2) Determine if students' attitudes toward educational research significantly relate to course achievement.
3) Determine if other variables - undergraduate GPAs, entering graduate GPAs, and scores on the National Teacher Examination (NTE) - are significantly related to course achievement.
4) Determine the better predictors of course achievement among the variables of attitude measures, GPAs, and the NTE.

Conventional wisdom in education repeatedly assures us that attitudes of students toward a course plays an important role in success in that course. Conventional wisdom also leads us to believe that a positive attitude toward an area such as educational research would lead the student to a better application of material learned in such a course. It is a fairly safe assumption that each instructor of an educational research course has as one of his written or unwritten goals the inculcation of a positive attitude toward educational research in each of his students.

Because attitudes are partially emotional in genesis and oftentimes illogical in nature, the relationship between academic achievement and attitudes is far from clear-cut (Jerrolds, Benton and McCutcheon, 1975). Comparatively little research has been devoted to the task of systematically measuring teachers' research attitudes (Isakson and Ellsworth, 1979).

It has long been recognized that the best predictor of academic success is academic performance (Sax, 1980). Therefore it was thought to be worthwhile to analyze also the relationship of the test scores of the subjects in the present study with their GPAs.

Five Southern states, but not Georgia, mandate the use of the National Teacher Examination (NTE) to evaluate teachers or prospective teachers (Northern, 1980). Thus it is important to examine

the predictive validity of the NTE in relation to various aspects of teacher performance and teacher education. Although the NTE is not mandated in Georgia, it is one of the standardized instruments that an undergraduate or a graduate student in education may elect to use as evidence of his qualifications to do college or university work.

The first course in Educational Research is often unofficially, but no less actually, used by advisors and sometimes the student himself to determine whether the student should pursue a particular degree. For the above reasons it was deemed important to examine the relationship between the NTE and students' performance in Educational Research.

Method

Subjects. Subjects were drawn from the ninety students enrolled in four graduate sections of educational research at North Georgia College. All sections were taught by the same instructor. Four students dropped the course, leaving a total of 86 subjects. All 86 took the same midterm and final examination. Undergraduate GPAs were available for 84 students. Entering graduate GPAs at the beginning of the course were available on 73 of the subjects (for 12 of the subjects this was their first quarter in the graduate program, and data were not available for one transient student). For admission to the graduate program North Georgia College requires the NTE, the Graduate Record Examination (GRE), or the Millers'

Analogies Test (MAT). Sixty-nine of the subjects had the NTE; eight had the GRE; three had the MAT; five students were classified as non-degree status, pending submission of one of these test scores; and one student was a transient student.

Instruments. Achievement in the educational research course was measured by two multiple-choice examinations constructed by the instructor of the course. All items on the examinations were matched with objectives for the course. Approximately one-half of the items were taken from the instructor's manual that accompanied the students' textbook (Ary, Jacobs, and Razavieh, 19 0). The reliability estimate (KR21) of the midterm examination was .78, and for the final examination the reliability estimate was .84.

Attitude in the course was measured by the Attitudes Toward Educational Research Scale (ATERS) administered as a pre-test on the first day of classes and as a post-test on the last day of classes. ATERS is a 50-item Likert-type scale, designed by Isakson and Ellsworth (1979), which measures teachers' attitudes toward educational research. The authors of the instrument have reported an internal consistency reliability of .92 using coefficient alpha. A test-retest coefficient was reported to be .62. The retest was taken one semester after the test, thus the reported coefficient might be a lower estimate than most such comparisons because of the longer interval. The authors

of the instrument report a number of construct validity studies indicating there is reason to believe the instrument to be an acceptable tool for examining teachers' attitudes toward educational research.

Andrews, Blackmon, and Mackey (1980) describe the purpose of the NTE as follows:

> The National Teacher Examinations are standardized, secure tests that provide objective measures of academic achievement for college seniors completing teacher education programs and for advanced candidates who have received additional training in specific fields. (p. 359)

Concurrent and predictive validity information for the NTE has been reported by Ayers and Qualls (1979).

Results and Conclusions

It was hypothesized that the students who completed the research course would have significantly higher attitude scores on the ATERS than they had at the beginning of the course. This hypothesis was supported ($t=9.63$, $df=85$, $p < .01$, one tailed test). Thus, attitudes can be significantly improved by such a course.

Results of correlating the achievement of the students with predictor variables of attitude, undergraduate GPAs, entering graduate GPAs, and NTE scores are summarized in Table 1. The single best predictor of success in educational research, as measured by the

two objective examinations, was scores on the NTE (r=.61). Undergraduate GPAs and graduate GPAs were also significantly related to achievement (r=.47 and r=.45, respectively). Even though the ATERS post-test scores were significantly higher than ATERS pre-test scores, ATERS pre-test, ATERS post-test, and ATERS gain scores were not significantly related to achievement. Thus the relationship between attitude toward educational research and achievement in an educational research course remains unclear.

References

Andrews, J. W., Blackmon, R., & Mackey, J. A. Preservice performance and the national teacher exams. Phi Delta Kappan, 1980, 61, 358-359.

Ary, D., Jacobs, L. C., & Razavieh, A. Instructor's manual to accompany introduction to research in education (2nd ed.). New York: Holt, Rinehart and Winston, 1979.

Ayers, J. B., & Qualls, G. S. Concurrent and predictive validity of the national teacher examinations. Journal of Educational Research, 1979, 73, 86-92.

Isakson, R. L., & Ellsworth, R. The measurement of teacher attitudes toward educational research. Paper presented at the meeting of the American Educational Research Association, San Francisco, April 1979.

Jerrolds, B. W., Benton, S. E, & McCutcheon, B. Measuring attitudes toward reading and reading instruction. In G. L. Reidy (Ed.), Reading: Skills and Attitudes; Method, Material, Measurement. Clemson, South Carolina: Clemson Reading Conference, 1975.

Northern, E. F. The trend toward competency testing of teachers. Phi Delta Kappan, 1980, 61, 359.

Sax, G. Principles of educational and psychological measurement and evaluation (2nd ed.). Belmont, Calif.: Wadsworth Publishing Co., 1980.

Table 1

Correlations Between Predictor Variables and Composite Educational Research Examination Scores

Predictor	n	Correlation
ATERS Pretest	86	-.03
ATERS Postest	86	+.14
ATERS Gain	86	+.20
Undergraduate GPA	84	+.47*
Entering Graduate GPA	73	+.45*
Weighted Common NTE	69	+.61*

*Significant at .01 level